REMARKS/ARGUMENTS

The Office Action mailed April 26, 2005, has been reviewed and carefully considered. Claims 1-5 and 7-9 remain pending herein, where claims 1, 7, and 8 are the independent claims. Reconsideration of the patentability of the above-identified application, including claims 1-5 and 7-9, in view of the following remarks is respectfully requested.

In the Office Action mailed April 26, 2005, the drawings were objected to as lacking descriptive labels for the blocks in the block diagrams. Applicant respectfully asserts that replacement sheets were mailed to the Examiner as an attachment to Applicant's Amendment mailed December 29, 2005 (amendments to Figs. 1 and 2 such that they now include descriptive labels), and therefore the objection to the drawings should now be withdrawn.

Claims 1-5 and 7-9 stand rejected under 35 U.S.C. §103(a) as obvious by U.S. Patent No. 6,292,778 (Sukkar) in view of U.S. Patent No. 6,567,778 (Chao Chang).

Applicant's inventions as claimed call out automatic speech recognition method, which identifies company names in speech utterances. The inventions address specific speech recognition problems that occur frequently in the automatic speech recognition methods and systems, for the identification of company names. The claims reflect a specific solution to the persistent problem in the art that users, when pronouncing company names, commonly omit a part of the company name, form abbreviations, use acronyms, or exchange parts of the company name, etc. (see page 1, lines 5-11, of the specification). Applicant's inventions as claimed include a step of comparing, or a comparison unit 14 to compare a word sequence hypothesis derived from a speech utterance, with entries of a database 15.

Database 15 stores company names (page 3, lines 2-5) and includes abbreviated names (page 3, lines 9-12). Variants of the company name such as, for example, appropriate mix-ups of parts of company names, and colloquial formulations are generated and stored in a separate database 17 (page 4, lines 12-16), within the system or accessible within the inventive process. If it is determined that the database 15 does not contain any entries found "completely" in the word sequence hypothesis, the comparison unit 14 must them implement searches within the database for entries that are at least partly in the word sequence hypothesis (page 3, lines 14-18). Certain parts of the company name may receive a larger weight factor than other parts (page 3, lines 19-24), which is taken into consideration in the determination made, as claimed.

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The Examiner's specific rejections of independent claims 1 and 7 (as amended by applicant's December 29, 2004, Amendment) are set forth at the bottom of page 4. There, the Examiner asserts that Sukkar discloses a word lexicon database 318 for storing data structures of words to be recognized (col. 9, line 59 to col. 10, line 19; Fig. 3), a speech recognition application for recognizing company names (col. 13, lines 36-43), "implying" a word lexicon database 318 to store company names.

While the Examiner asserts further that Sukkar omits "only" storing entries including string variants of the company names in a database, the variants including at least one of mix-ups of part of company names, colloquial formulations of company names, abbreviations of company names, and acronyms of company names, applicant respectfully disagrees. Sukkar also fails to disclose the features as claimed requiring the inventions to define particular words and/or formulations *a priori* during a comparison of entries. Nor does Sukkar take into account that said particular words and/or formulations are used, and that are ascribed to represent more importance to the inventive systems/methods.

Sukkar discloses a task-independent utterance verification with subword-based minimum verification error training. According to Sukkar, individual subwords are first recognized (col. 4, lines 18-20, of Sukkar). Then a word lexicon is consulted to determine a word, phrase, or sentence that matches strings of the subwords (col. 4, lines 20-29). Col. 13, line 36, to col. 14, line 9, describes a specific implementation of the method described by Sukkar, which is used to recognize company names. And as already stated above, Sukkar fails to disclose that the database of company names includes variants of the company names, as now recited in independent claims 1 and 7.

That is, claims 1 and 7 call out, and Sukkar fails to teach or suggest, at least the following:

1.) storing entries including string variants of the company names in a database, the variants including at least one of mix-ups of part of company names, colloquial formulations of company names, abbreviations of company names, and acronyms of company names;

2.) requiring the inventions to define particular words and/or formulations *a priori* during a comparison of entries; and

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3.)   taking into account that said particular words and/or formulations are used, and that are ascribed to represent more importance to the inventive systems/methods.

And with all due respect, applicant respectfully asserts that Chao Chang fails to teach or suggest what Sukkar lacks.

Applicant agrees that Chao Chang discloses speech recognition using slot semantic confidence scores, and includes sending or transporting various subsets of words to a natural language interpreter (NLI) for out of system processing. According to Chao Chang, a stream of input speech is recognized and identified (see col. 5, lines 50-52 of Chao Chang), a word confidence score is attached to each recognized word (col. 5, lines 52-54), and the words are SENT or TRANSPORTED to an interpreter to determine required information for an application.

In the example given in Chao Chang, the application is for air flight information, which requires origin, destination, and time of travel (col. 6, lines 15-18). In a further example for determining a stock name, Chao Chang recognizes that some of the words of the stock name are necessary and others are not necessary (col. 6, line 54 to col. 7, line 14). However, Chao Chang fails to teach or suggest either a method or system which stores entries including string variants of the company names in a database, the variants including at least one of mix-ups of part of company names, colloquial formulations of company names, abbreviations of company names, and acronyms of company names, applicant respectfully disagrees, defining particular words and/or formulations *a priori* during a comparison of entries, nor using said particular words and/or formulations, which may be or are ascribed to represent more importance to the inventive systems/methods, as recited in independent claims 1 and 7.

Accordingly, it is respectfully submitted that independent claims 1 and 7 are allowable over Sukkar in view of Chao Chang under 35 USC Section 103 (a), and respectfully request withdrawal/reconsideration of the claims rejections thereunder, as well as claim 2-5, which depend from claim 1.

Claim 8 recites "finding entries in the database that are at least partially found in the word sequence hypothesis by comparing the word sequence hypothesis with the entries which represent company names stored in the database (15)", and "producing a probability for each entry found during the step of comparing, the probability being dependent on the number of

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words in each of the entries found in the word sequence hypothesis, wherein each word has a weight factor, particularly characteristic words having a large weight factor, the weight factor being taken into account in determining the probability for each entry". Support for this limitation of claim 8 is found at page 3, lines 17-24.

With respect to claim 8, not only does Sukkar fails to assign weight factors to specific words in entries of a database, but Chao Change also fails to teach this limitation. Chao Chang describes that some of the words of a stock name are not necessary for recognizing the stock. However, there is no teaching or suggestion that the words in the stock name have weighting factors.

While the Examiner asserts that Sukkar's "most likely words" are recognized, the text at col. 10, lines 10-12, refers to having to first generate a first probability, which teaches away from applicant's claimed systems and methods. As stated by the Examiner, Sukkar omits storing variants of company names. Hence, even assuming arguendo that Sukkar produces a first probability dependent upon a number of words in a sequence, where each word has a weight factor, combining Sukkar with Chao Chang does not remedy the failing.
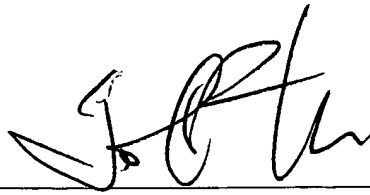
More particularly, combining Chao Chang with Sukkar still does not realize a method or system which finds entries in the database that are at least partially found in the word sequence hypothesis by comparing the word sequence hypothesis with the entries which represent company names stored in the database (15)", and "producing a probability for each entry found during the step of comparing, the probability being dependent on the number of words in each of the entries found in the word sequence hypothesis, wherein each word has a weight factor, particularly characteristic words having a large weight factor, the weight factor being taken into account in determining the probability for each entry as claimed.

Therefore, it is respectfully submitted that independent claim 8 should also be allowable over Sukkar in view of Chao Chang, and that new claim 9, because it depends from independent claim 8, is patentable for at least the same reasons.

The application is now deemed to be in condition for allowance and notice to that effect is solicited. It is further believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to Patent and Trademark Office Deposit Account No. 14-1270.

Respectfully submitted,

By _____

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